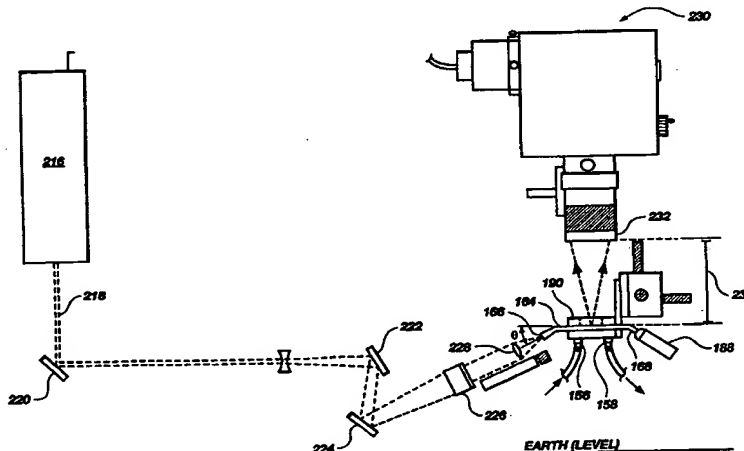




INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : G01N 21/00, 33/552, 33/72, G02B 6/26, 6/10	A1	(11) International Publication Number: WO 97/35176 (43) International Publication Date: 25 September 1997 (25.09.97)
(21) International Application Number: PCT/US97/04398 (22) International Filing Date: 19 March 1997 (19.03.97) (30) Priority Data: 60/013,695 19 March 1996 (19.03.96) US 60/022,434 8 August 1996 (08.08.96) US (71) Applicant (for all designated States except US): UNIVERSITY OF UTAH RESEARCH FOUNDATION [US/US]; 210 Park Building, Salt Lake City, UT 84112 (US). (72) Inventors; and (75) Inventors/Applicants (for US only): HERRON, James, A. [US/US]; 2965 S. Plateau Drive, Salt Lake City, UT 84109 (US). CHRISTENSEN, Douglas, A. [US/US]; 8520 Top of the World Circle, Salt Lake City, UT 84121 (US). POLLAK, Victor, A. [US/US]; 1224 East South Temple, Salt Lake City, UT 84102 (US). McEACHERN, Richard, D. [US/US]; Apartment A, 3065 Signature Boulevard, Ann Arbor, MI 48103 (US). SIMON, Eric, M. [US/US]; 5619 Emigration Canyon, Salt Lake City, UT 84108 (US). (74) Agents: BOND, Laurence, B. et al.; Trask, Britt & Rossa, P.O. Box 2550, Salt Lake City, UT 84110 (US).		(81) Designated States: AU, CA, JP, NO, US, European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>

(54) Title: LENS AND ASSOCIATABLE FLOW CELL**(57) Abstract**

Improvements in a biosensor of the type having reservoirs or wells for analyzing a biological liquid are disclosed. A biosensor (190) includes a waveguide (164) placed between a plurality of members such as plates (100, 186), at least one of the members (100) being formed to define the walls (132, 134, 136) of the reservoirs where the liquid is biologically analyzed. The walls of the reservoirs are made of an inert, opaque material such as a metal. Although the biosensor may include a gasket (162), the gasket is associated with the members and waveguide in such a way (e.g. by recessing the gasket into a channel formed into a metal plate) so that the gasket does not form any significant portion of the reservoir wall. Waveguides of varying composition (e.g. plastic, quartz or glass) may be associated with the members to form the biosensor. The metal plate of the biosensor has input and output ports for infusing, draining, or oscillating the liquid to be analyzed in the reaction reservoir. Also disclosed is a sled-shaped waveguide associated with a rear lens to couple light out of the waveguide to serve as a quality control measure thus insuring that the biosensor is properly placed and that the light is working.

FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AL	Albania	ES	Spain	LS	Lesotho	SI	Slovenia
AM	Armenia	FI	Finland	LT	Lithuania	SK	Slovakia
AT	Austria	FR	France	LU	Luxembourg	SN	Senegal
AU	Australia	GA	Gabon	LV	Latvia	SZ	Swaziland
AZ	Azerbaijan	GB	United Kingdom	MC	Monaco	TD	Chad
BA	Bosnia and Herzegovina	GE	Georgia	MD	Republic of Moldova	TG	Togo
BB	Barbados	GH	Ghana	MG	Madagascar	TJ	Tajikistan
BE	Belgium	GN	Guinea	MK	The former Yugoslav Republic of Macedonia	TM	Turkmenistan
BF	Burkina Faso	GR	Greece	ML	Mali	TR	Turkey
BG	Bulgaria	HU	Hungary	MN	Mongolia	TT	Trinidad and Tobago
BJ	Benin	IE	Ireland	MR	Mauritania	UA	Ukraine
BR	Brazil	IL	Israel	MW	Malawi	UG	Uganda
BY	Belarus	IS	Iceland	MX	Mexico	US	United States of America
CA	Canada	IT	Italy	NE	Niger	UZ	Uzbekistan
CF	Central African Republic	JP	Japan	NL	Netherlands	VN	Viet Nam
CG	Congo	KE	Kenya	NO	Norway	YU	Yugoslavia
CH	Switzerland	KG	Kyrgyzstan	NZ	New Zealand	ZW	Zimbabwe
CI	Côte d'Ivoire	KP	Democratic People's Republic of Korea	PL	Poland		
CM	Cameroon	KR	Republic of Korea	PT	Portugal		
CN	China	KZ	Kazakhstan	RO	Romania		
CU	Cuba	LC	Saint Lucia	RU	Russian Federation		
CZ	Czech Republic	LI	Liechtenstein	SD	Sudan		
DE	Germany	LK	Sri Lanka	SE	Sweden		
DK	Denmark	LR	Liberia	SG	Singapore		
EE	Estonia						